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Journal of the Society of Arts.

*FRIDAY, JANUARY* 10, 1862.

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## INTERNATIONAL EXHIBITION OF 1862.

The Council beg to announce that the Guarantee Deed is now lying at the Society's House for signature, and they will be much obliged if those gentlemen who have given in their names as Guarantors, as well as others interested in the Exhibition, will make it convenient to call there and attach their signatures to the Document. Signatures for sums amounting in the aggregate to £442,850, have been attached to the Deed.

## WEEKLY PROGRESS OF THE INTERNATIONAL EXHIBITION.

The description of the progress made during the past week must necessarily be brief, as the work now to be executed consists chiefly in putting finishing touches ; indeed, the building begins to bear such an aspect of completeness, that to the uninitiated little remains to be done except colouring and decoration. Perhaps a greater advance can be detected in the Northern Courts, and this because hitherto they have been most backward.

The progress of the domes is highly satisfactory, and no doubt now remains of their completion in time. In the race between them the western one is still, in sporting language, "the favourite." It is true the ribs of the eastern dome are up, but they have been raised one at a time, so that the most troublesome task of fitting them to the ring has still to be accomplished Mr. Ashton, who has the charge of fixing the ironwork of the western dome, taking a lesson from the slow progress on the other side, has constructed the dodecagonal ring at first on the top of the scaffold, so that the ribs are more easily guided to fit directly into their places. All these ribs have been raised simultaneously with great rapidity, and now only want the top jointings to be completely fixed.

The experiments in colouring still continue. Besides Mr. Hudson, Mr. Kelk has also made a suggestion, and the two systems can be at once compared. Captain Fowke, who has proposed a plan for colouring the machinery sheds, is about to submit one also for the nave, and by next week it is expected that the matter will be fully settled. Captain Fowke's plan, founded on the experience of the Paris Exhibition, is, to trust rather for decoration to the objects exhibited, and the colouring he will propose will be as simple as possible. In the same manner as the exterior of the building invites decoration when the funds for that purpose are forthcoming, so the interior may be conveniently left for complete colouring to an experience which can be acquired only by degrees.

At present the different experiments give the nave a variegated and mottled appearance. A public critic has been so far misled as to suppose that this is to be the ultimate aspect of this part of the building.

The manner in which every part is lighted, and the amount of light obtained, will be found on close inspection to be highly satisfactory. No place in the building can be said to be badly off in this respect, but perhaps if any selection could be made, the nave would be pronounced at once to fulfil its requirements. The angle at which the rays fall upon the space below subdues the light to just the strength which will be required for the due exhibition of the costlier objects which it is proposed to place there.

If the hopes raised by the recent pacific news from the other side of the Atlantic are fully realised, it may be expected that the United States of America will send a number of objects sufficient to occupy a large amount of space, and Her Majesty's Commissioners are prepared to make arrangements accordingly.

## THE BRITISH COLONIES AND THE INTERNATIONAL EXHIBITION OF 1862.

By P. L. Simmonds.

### No. XII.—The West Indian Colonies.

Early in September (vol. ix., p. 703) I furnished an outline of the part which the British West Indian Colonies would take in the forthcoming Exhibition, and I then expressed my regret that so few of them were coming forward actively with a representation of their products. Since then, however, it is satisfactory to find that the majority of the islands have become impressed with the importance of putting in an appearance for themselves, so that they may compete creditably with the republic of Hayti, the Spanish islands of Cuba and Porto Rico, and the French colonies of Guadaloupe, Martinique, and Guiana. The French have, of late years, been especially active in developing their colonial products, as any one who has visited their permanent Exposition or Colonial Museum at the Palace of Industry, in the Champs-Elysées, Paris, can testify.

It was from Martinique that coffee was first disseminated over the Antilles, and though the culture has now been transferred very largely to Ceylon and Java, and is prosecuted more extensively in Brazil and Central America, yet the coffee of the West Indies still possesses a public interest and repute. Besides its superior coffee, Martinique also produces cocoa, cotton, sugar, and tobacco, indigo, and other dyewoods, preserved fruits, and fine straw hats. The aggregate value of the imports and exports of the three French colonies, a few years ago, was about four millions sterling.

I stated in my former communication on the West Indies, that the colonies which had expressed their intention of taking part in the Exhibition were Grenada, Trinidad, British Guiana, Guiana, Jamaica, and St. Vincent. Since then commissions have been appointed, and active steps taken in the following islands,—the Bahamas, Barbados, Dominica, and St. Kitts. It has been said that no portion of the British dominions is less demonstrative than her colonies. This accusation may be true or not. But it would not be difficult to assign many good and sufficient reasons why the colonies should be less demonstrative than older and more highly favoured countries. The youth emerging from the trammels of schools, and tutors, and guardians, has too much of an earnest solicitude for his own welfare to spend much time, or feel any great interest in the mere progress of the world around him. His first and more immediate consideration embraces only the range of such objects as are either directly or indirectly connected with his own well-being. He has no time, and feels no aptitude for interesting himself in distant and remote objects, especially in such as are simply intended to be indicatory of the world's progress in arts and civilization. These will have his attention when time and leisure have matured his views and enhanced his position, but in the meantime all his efforts are demanded to secure that amount of personal independence and relative well-doing by which the comfort and respectability of the future may be secured. Just so, in some degree, it is with the colonies; they have long been in a state of minority, and have had, and still have much to do in the way of arranging and providing for their own immediate interests. Remote from the great centres of progress and the great marts of business and commerce —isolated from the attractions of the world's splendour, and engrossed with their own immediate concerns, they feel indifferent to the demonstrations of their more favoured fellow-subjects, and take little interest in what does not concern them. The resources of richer and more fortunate colonies enable them to enter the lists of competition with more spirit, while such as are only emancipating themselves from the meshes of misfortune, are too busily employed to think much, or speculate greatly, on the progress of art or the triumphs of science.

Whatever brings countries and colonies into comparative and competitive contrast, tends to stimulate the zeal of their respective inhabitants, awakens energy, rouses to effort, and introduces improvements. The products of a country are an image of its development, and the industry of a country discloses the secret springs of its enterprise and success, and these together illustrate the causes of its prosperity, or of its decay. Production is a proof of civilization, and unproductiveness is an evidence of poverty and barbarism. The former is an ascending movement towards a higher degree of physical comfort—the latter is a descending movement towards a lower state of physical misery.

A glance at happy England and her rich colonies abundantly illustrates the glorious results of productive industry, but the International Exhibition itself is designed to afford on the largest scale the same proof from all parts of the globe. It will be a grand emblazoned picture of the practical effects of human industry, under the guidance of art and science—a revelation written within and without of the riches, power, influence, wealth, comfort, and happiness that flows in upon man from his skilful appliance of the resources which an all-wise Creator has placed around him in the material world. To have a name and a place in such an Exhibition is of itself no mean honour.

In the Bahamas the Acting-Governor has appointed the following gentlemen Commissioners:—The Honourables John C. Lees, Wm. Henry Doyle, T. Chapman Harvey, G. D. Harris, and W. D. Kirkwood, and Messrs. J. S. George and Timothy Darling. The Commissioners met on the 15th ult., and the Hon. G. D. Harris accepted the office of Hon. Sec., and Mr. S. Harris, of 27, Mansell-street, has been appointed London Commissioner. The Duke of Newcastle has authorised a vote of £100 from the Crown funds of the colony for the defraying any contingent expenses. The Local Commissioners having entered with promptness and cordiality on the performance of their duties, there is reason to hope that the Bahamas will be adequately represented at the Exhibition, although the range of products of the islands is not large, comprising chiefly sponge, salt, pine-apples, shell-work, timber, palmetto plait, and agave fibre.

The Governor-General of Barbados has requested Mr. Stephen Cave, M.P., to act as Commissioner in London for this island, and a very fair representation of its products and industry is likely to be made. Besides its staples of sugar and arrowroot, cotton, and fibres, aloes, petroleum, or green tar, and other medicinal products, there will be cases of mosses and shell work, silk-cotton, and flowers and fruits of the island modelled in wax. One hundred feet of space has been allotted to this island.

In Dominica the legislature has voted a small sum of money, £50, for the purpose of forming a collection of island products. A Commission has also been appointed by the Lieut.-Governor, of which the Hon. John Imray, M.D., is chairman. That gentleman is actively engaged, and is bringing his scientific knowledge to bear in the matter. Samples of the chief exports, sugar, molasses, rum, coffee, cocoa, tous les mois, arrowroot, manioc, &c., will be sent. Dominica has no manufactures, but the island is especially rich in beautiful and valuable wood, and the collection of some 60 or 70 varieties that will be sent will be interesting. The samples will be in slabs about a foot square, and 1 to 1½ inch thick, with the scientific name of the tree and the quality and application of the wood attached to each.

Grenada.—The House of Assembly, acting upon the suggestion of the Lieut.-Governor, has appointed a Commission consisting of the following gentlemen:—Messrs. Davison (chairman), Purcell, Hall, Alexander, Sinclair, Steele, and Dr. Wells, from among its body to facilitate the transmission of articles. The planters, however, were not in the best of spirits to make any exertion, as they had experienced the worst crop season they had had for many years, and from the continuance of heavy rains, not more than two-thirds of the crop of the island had been reaped, and the produce made being generally of an inferior quality, has commanded lower prices than usual in the market.

Another cause of despondency is the disappointment in not having received any addition to their scanty supply of labour by the importation of Coolies, which they had been expecting for the last two years. These two causes combined had thrown a gloom over their prospects, which led them to take little interest in making a collection of products. Mr. Thomson Hankey, M.P., the Colonial Government agent here, has, however, been stimulating the colonists to some exertion, and it is expected the colony will fill a small space of 12 square feet with samples of cotton (from Carriacou), cocoa, nutmegs (which gained the prize in 1851), and other spices, starches, and sundry minor articles.

In Jamaica considerable activity has at length been manifested, and there is an earnest desire to be well represented. The Council of the Royal Society of Arts, which acts as the Island Commission, has memorialized the Governor in Council, praying that in the annual grants to be proposed to the House of Assembly at the forthcoming session, the sum of £1,000 be may included to enable the Council to carry out their plans for the effectual representation of the colony. A Kingston paper thus writes on this subject:—

"A thousand pounds might appear a large sum to those who have faith in the hideous cries of the ruin-mongers who, for years past have been endeavouring—and we are sorry to say not without some degree of success—to convince the world that this country has sunk to the lowest depths of destitution and misery; but to those who know the purposes for which those cries are raised, and who further believe that this country is yet rich both in material resources and trade, the sum of money prayed for by the Society of Arts will not appear extraordinary. It is, moreover, to be considered that the money is not desired for any ordinary undertaking. It is to carry out a purpose, and to fulfil an object in which the whole world takes an interest, and expects us to act. This expectation is the more remarkable on the part of the people of the mother country. They are bringing together the industries of all parts of the earth, and it is fitting that British Colonies, wherever they are to be found, should also be present; they are desirous to find out what new channels of commerce have been opened up, and what new articles of trade have been made known during the past ten years. Jamaica has resources which may not only prove her wealthy, but render her once more important to the commerce of the world; it is, therefore, necessary that when people from every foreign clime are hastening to London to present the proofs of their industry and enterprise, bearing in their hands samples of the natural resources of their several countries, that the people of Jamaica should show themselves equal in the race, and manifest an equal eagerness to avail themselves of the advantages which the Great Fair will hold out to the people of the entire civilised world. Objects of this kind cannot be carried out by the entire people of the country. They must be left to a few active minds who are willing to act. Such an active power Jamaica most fortunately possesses in the Council of the Royal Society of Arts. The gentlemen of whom the Council is composed are scientific men, who fully understand and appreciate the work in hand, and they have manifested a zeal which is peculiar to men of science in matters congenial to their taste and study; but giving their time and personal service are all that they can be expected to give. They must be furnished with the indispensable pecuniary means from other sources, and, as we have shown on a former occasion, the proper source is the public purse. The colonists of Demerara have cheerfully expended a thousand pounds, and why may not the Jamaicans do the same? Why may we not expend a thousand pounds to uphold the dignity of our country, and, at the same time, make its resources known to the world—we, who pay average taxes of £260,000 per annum?—we, who expend annually over £30,000 to collect our revenues?"

Mr. Lucas Barrett, F.L.S., F.G.S., the government geologist, will make a selection of the economic minerals collected by the geological surveyors in the island, which will consist of the following sets:—

1. Metals and metallic ores—copper, iron, zinc, and lead ores.
2. Minerals used in the arts and manufactures—manganese, cobalt, sulphate of barytes, &c.
3. Minerals used in agriculture as manures—gypsum, phosphate of lime, shell sand, &c.
4. Rocks and minerals used in the construction of buildings—building stones, limestones, and marbles.

The value of a collection of this kind is greatly increased by the addition of mining plans and geological maps, and is rendered more intelligible by a descriptive essay. Mr. Barrett therefore intends sending copies of the plans of the lodes from which the minerals were obtained, and the geological maps of the districts in which they occur, together with a short account of the geology of Eastern Jamaica, and a descriptive catalogue of the collections, which he may be able to personally arrange in the building should he obtain official leave of absence, as he has been nominated one of the London Commissioners.

The Jamaica Cotton Company apply for a space of about 120 feet, to exhibit specimens of cottons, plantain, rhea, and other vegetable fibres of the island. The list of products and articles intended to be sent from Jamaica is a large and interesting one, but far too voluminous for enumeration in the *Journal*.

At a special meeting of the Hanover Society of Industry, held in the Court House, Lucea, on the 10th September, it was unanimously and cordially resolved to co-operate with the Royal Society of Arts of Jamaica in procuring for the Great International Exhibition a collection of suitable specimens of the productions of Hanover and the adjoining parishes.

The importance of the object in the present circumstances of Jamaica can hardly be over-estimated. In the Exhibition of 1851, Jamaica was entirely unrepresented. It is impossible to calculate the loss which the island sustained in consequence of this neglect—and, were the present opportunity neglected, it would certainly be an unutterable disgrace, and prove injurious to the island in a very high degree. It is on this account that his Excellency the Governor, in the Government notice which he has issued on the subject, "earnestly invites the co-operation of the inhabitants of Jamaica of all classes in order to secure to the island the full advantage which is offered by so rare an opportunity of giving a world-wide notoriety to its many valuable natural and manufactured productions;" and the Hanover Society of Industry in at once responding to the call of the Governor and of the Royal Society of Arts in this matter, feel that they are only obeying the call of their imperative duty, and they do so with a large measure of confidence, that in this, as in all their previous efforts, they will secure the warm sympathy and efficient assistance of many around them, besides the members of their own Society. They trust, therefore, that the space which may be allotted to them in the Great Exhibition will be so creditably occupied that, even amid the grandeur and multiplicity of the objects with which the Great Palace of Industry will be filled from every part of the wide world, the humble niche of the Hanover Society of Industry will not pass unnoticed by the well-wishers of Jamaica.

The following gentlemen have been appointed to act as London Commissioners for Jamaica:—

Sir Joshua Rowe, K.C.B., late Chief Justice, Thomson Hankey, Esq., M.P., Stephen Cave, Esq., M.P., Mr. William Smith, Mr. William Cunningham Glen, barrister, Mr. Lucas Barrett, F.L.S., F.G.S., Mr. Edward Chitty, and Mr. A. F. Ridgway, agent for Jamaica.

In the island of St. Kitts the following gentlemen have been appointed Commissioners by the Lieut.-Governor:—Messrs. J. Berridge, S. Davis, and Wm. Clukies; but no details of the intentions of the colonists have yet come to hand.

British Guiana held its Local Exhibition, of products intended for transmission, on the 28th, which I shall take another opportunity of drawing attention to.

## INTERNATIONAL EXHIBITION OF 1862.

### FRENCH DEPARTMENT.

The *Moniteur* publishes the following report, addressed to the Emperor by Prince Napoleon, as President of the French Imperial Commission of the Universal Exhibition of 1862:—

"Sire,—At the time of the Universal Exhibition of Paris in 1855, your Majesty deigned to affix your signature of approval to the regulations prepared by the Imperial Commission. A decree of the 6th of April, 1854, in sanctioning the arrangements contained in that regulation, allowed them to be usefully appealed to in several cases, in order to obtain from the different Ministerial departments the adoption of measures calculated to facilitate the preparatory works of installation. It is thus that a decision of the Minister of Finance, founded on the text of Article 20, exempted from stamp duty the way bills accompanying the packages intended for the Universal Exhibition. The Imperial Commission, charged by your Majesty with the care of organising the French section of the Universal Exhibition of 1862 in London, has inspired itself with your Majesty's liberal ideas, and has thought it just to leave to the account of the State the expense of carriage of all articles intended for that Exhibition, from the railway station nearest to the place of production as far as London, as well as the carriage of them back to France. In presence of so considerable a charge and of the relatively small amount of the credit opened by the law of July 2, 1861, it appears proper that the Imperial Commission should be placed in the position to obtain from the financial administration all the facilities compatible with the exigencies of the law. The approval of the regulations will, in particular, allow the text of Art. 27 to be acted on, in demanding from the Minister of Finance the exemption from stamp duty granted in 1855. I have, in consequence, the honour of submitting for your Majesty's signature the subjoined decree. Accept, Sire, the homage of the deep and respectful attachment with which I am your Majesty's devoted cousin,

" NAPOLEON (JEROME)."

The *Moniteur* publishes an Imperial decree approving the regulations prepared by the Imperial Commission, of which Prince Napoleon is the president, appointed to organize the French section of the Universal Exhibition of 1862 in London, and which is dated the 15th of June, 1861. The following are the principal regulations :—

" Article 1. The Universal Exhibition of 1862 will be opened in London on the 1st of May.

" 2. The communications made by the authorities or by private individuals on the subject of the Exhibition are to be addressed (not prepaid) to the Councillor of State, Secretary-General of the Imperial Commission, at the Palace of Industry, Paris."

The second section of the general regulations indicates the manner in which French produce is to be selected for admission ;—

" 3. The prefects will appoint the local juries selected to propose the admission of exhibitors and of their produce. They will fix the number of juries in their department and the number of each jury. These jurors are to be chosen from among the persons whose character, general knowledge, and impartiality offer the best guarantee to manufacturers and agriculturists.

" 4. The nomination of the juries of admission is to take place without delay. The composition of each jury, as well as the seat and circumspection of its operations, is to be published without delay throughout the department.

" 5. The prefects will arrange with the municipal authorities to supply the juries with all that is necessary for their meetings, and for the execution of their duties.

" 6. The juries will adopt all measures required for the success of the Exhibition. They will propose to the Imperial Commission the admission of exhibitors ; they will preside at the reception and at the despatch of their produce.

" 7. Their presidents and their secretaries will correspond directly with the Imperial Commission. The latter forbids all correspondence with the exhibitors on the subject of the admission and despatch of their produce.

" 8. Each jury will open lists, on which are to be inscribed the persons who desire to take a part in the Universal Exhibition.

" 9. The juries cannot admit a Frenchman to present the produce which he has manufactured in a foreign country, but they may admit a foreigner to propose the articles which he has produced in France.

" 10. The juries may inscribe on the lists all industrial produce manufactured since 1850, and all agricultural produce, with the exception of living animals and plants, animal and vegetable matter liable to decomposition, detonating or dangerous substances.

" 11. Corrosive acids and salt-spirits, or alcohol oil or essence, and generally bodies easily ignited, cannot be admitted except in vases of solid glass, hermetically closed. Capsules and other articles of the same nature, into which fulminating powder shall not have been introduced, may be admitted.

" 12. Among the persons inscribed the juries shall select those who, by the importance or merit of their produce, shall reflect the greatest credit on the French exhibition. They will make their choice on the direct examination of the produce, and, in default of such examination, on an inspection of the patterns, models, or plans, and on public notoriety.

" 13. The juries will propose to the Imperial Commission the exhibitors chosen by them. For that purpose they will form lists, according to the model annexed to these regulations. They will take care to mention in these lists the medals obtained by the producers at the Universal Exhibitions of 1851 and 1855. As those rewards are personal, no account will be taken of those which shall have been given to an individual or to a company of which the exhibitor is the heir or the successor.

" 15. Producers alone are to be permitted to exhibit. The juries shall ascertain the quality of the person in whose name each production is to be presented. The name of the merchant who orders or habitually sells an article may, with the consent of the producer, be united to the name of the latter. In this case the merchant's address will figure in the catalogue after that of the exhibitor.

" 16. The Imperial Commission, assisted by a central jury of revision residing in Paris, will decide on the complaints addressed to it against the decisions of the juries of revision. Every demand upon which a decision shall not have been pronounced by the juries shall be regarded by the Imperial Commission as null.

" 17. The Imperial Commission, taking into consideration the proposals of all the juries, and the extent of the space of which it can dispose in London, will indicate to the juries by the 15th of September, at the latest, the persons admitted to the Exhibition of 1862, and the space allotted to each of them.

" 18. When the Commission shall confine itself to indicate a jury the entire space reserved for its circumscription, the latter shall divide that space among those admitted to exhibit, according to the nature and to the importance of each exhibitor's produce. In such a case the jury will immediately commmunicate to the Imperial Commission the result of the allocation."

The third chapter of the regulations arranges the mode of transporting from Paris to London the articles to be exhibited, of which the expense is to be defrayed by the Imperial Commission.

" 28. The productions are to be received at the railway terminus from the 20th of February, 1862, to the 10th of March following. After that day the exhibitors will have to defray the cost of the transport. The produce of exhibitors which shall arrive in London after the 31st of March, 1862, may be refused if the commissioners of the Queen of Great Britain shall strictly maintain the last date as the limit of the admissions.

" 30. The Palace of the London Exhibition being constituted into a real *entrepot*, the exhibitors shall not have to pay any duty on the entrance of their produce into England. The Imperial Commission takes charge of all communications with the French and English Customs for the expedition of the produce."

The 4th chapter contains the regulations for unpacking and placing the produce in London.

The 5th chapter contains the regulations for the service at the Exhibition of London.

" 44. The Imperial Commission will adopt all necessary measures for preserving the articles exhibited from injury, but it is not responsible for accidents by fire or otherwise. It will likewise take care that the articles exhibited shall be watched over by numerous and active agents, but it will not be responsible for any thefts committed.

" 45. Every exhibitor may have his property guarded by one or more agents of either sex, whose names shall have been given to the Imperial Commission.

" 46. The agents so accredited may answer questions asked by the public, and deliver prospectuses, addresses or prices current ; but they shall be forbidden to invite purchasers by word of mouth.

" 47. No article exhibited shall be removed from the Palace previous to the closing the exhibition without a special permission in writing from the Commissioners of her Majesty the Queen.

" 48. A gratuitous card for entrance shall be delivered to each exhibitor or to his agent.

"49. Each accredited care-taker shall receive a special card for entrance to the Exhibition.

"50. Gratuitous cards shall be likewise granted to the members of the central jury of revision, and to the secretaries of the juries of admission present in London during the Exhibition.

"51. The cards so delivered shall be absolutely personal; and they shall be withdrawn if it shall be ascertained that they have been lent or given to any other person.

"52. An order of service attached in those parts of the Palace allocated to the French exhibitors will make known the agents appointed by the Imperial Commission to supply useful information, and to afford assistance if necessary."

The 6th chapter regulates the manner in which the produce exhibited is to be withdrawn after the closing of the Exhibition.

The 7th chapter contains the regulations respecting the works of Art to be exhibited.

The 60th article says:—

"That the Imperial Commission will take charge of works of Art at the residence of the artist or proprietor, and they will be returned there by the Commission."

## PROPOSED MEMORIALS TO HIS LATE ROYAL HIGHNESS THE PRINCE CONSORT.

The *Times*, in a leader recommending the erection of a monument as a memorial to the late Prince, says:—

"In the present case we feel very sure that, were the nation canvassed, as for a living chief, they would be for a monument in the common sense of the word. Nothing so well expresses a personal sentiment, be it love, or admiration, or reverence, or all in one. As yet there is no memorial of the Prince, except his name to some streets and public places, though he well deserved one for his successful labours in the Great Exhibition. Nor can it be said that the metropolis is overdone with monuments. It has probably fewer than any other city in the world for its importance and size. We possess a hundred sites which elsewhere would have every adornment that architecture and sculpture could contribute, but which have no other decoration but what the speculative builder could afford for the money. Some of our finest streets are totally destitute of national or historical features, and might as well have been laid out in Michigan ten or twelve years ago. Our parks, beautiful as they are, old as they are, peopled as they are with associations, and relieved as their horizon is with distant objects of interest, owe nothing themselves to either architect or sculptor, and are without a single record of the scenes they have witnessed. What, then, better than a monument, such as we all mean by the word? This question is easily answered. But, if we are to judge from the variety of suggestions, it is not so easy to select the particular kind. We have now two lofty pillars, neither of which quite pleases the eye or vindicates the national taste to those who know foreign or antique models. We may depend upon it, a third will be very like the other two. It has been suggested that, as we possess the dimensions and details, and the very sculptures themselves, of the famous "Mausoleum," which was a monument of conjugal affection, we might reproduce it on a suitable site, with the best materials in our power, and the world would not venture to disparage one of its own seven wonders. The answer to this is that reproductions always disappoint. It is invariably found that the original owed much of its charm to circumstances which we cannot reproduce or impart—to the site, the material, the sky, or the subject itself. Perhaps the most practical suggestion is that of an obelisk on the site of the transept of the Crystal Palace in Hyde-park—one of the most open and conspicuous positions about the metropolis. Except a few dwarf obelisks in freestone at the intersection of streets, a little larger than lamp posts and sometimes answering that purpose, and perhaps we ought to add an eccentric church tower a little south of the City-road, we do not possess a single specimen of that almost universal feature. Yet nothing so entirely satisfies the eye, nothing except a pyramid is so durable, and nothing is so well adapted to the perpetuation of a simple feeling or idea. Whether it would be possible to obtain a monolyth equal to the obelisks of Egypt we leave to the engineers, but cannot conceive there would be any difficulty. The shaft of Alexander's column at St. Petersburg is 84 feet long, and the story is that it was cut from a piece 14 feet longer. With the massive base it stands 154 feet high. It was raised to its place within one hour. It is of a red granite, rather darker than our own Peterhead, brought from a quarry 140 miles from St. Petersburg. Granite is the best stone for out-door monuments, and keeps both its texture and its colour in the smoke of London. The Scutari monument shows how easily the stern semi-barbarous character of an obelisk can be combined with classical and religious features. There is not a traveller who does not return from Rome with a regret that London is, it may be said, utterly destitute of an ornament which carries the mind back to the beginning of civilization and history, and harmonizes so well with modern architecture.

"We offer the suggestion in good time, because time is more easily lost than recovered, even for the most welcome propositions. Nobody knows what a flood of exciting incidents may soon turn the attention of the British public far away from the quiet virtues of a palace and the green sward which covers the once glorious transept of the Great Exhibition. It would be well, too, that the proposal were matured and settled before the opening of the new Exhibition, which thus already mourns its founder. If anybody has a better suggestion, we shall be glad to give it fair play; but we have a strong opinion that this is a case for a "monument," and that oneness, simplicity, force, and a universal significance should be its features. Something is wanted that may attract attention and excite curiosity, so that for ages to come the Englishman and the stranger may ask, as we ask concerning the Egyptian obelisks, but to more purpose, who was it that a nation thus commemorated? To be worthy of the Prince Consort, it ought to be on a majestic scale, and an ornament to the metropolis. It will be the first really national tribute of the kind paid to any member of the Brunswick dynasty. We need not go far from home to see the lavish honours and scarcely less than worship shown for the memory of a great soldier, of whom it is hard to say whether he did more good or evil to his country and the world. If Prince Albert did not overthrow empires and overawe continents; if he had not the opportunity of reconstructing the edifice of social order over the ruins of a monarchy, a church, and a nobility, he did at least all the good he could do, and that good singularly unmixed with evil, as it certainly was free from either vanity or ambition. So let us raise the finger that points to heaven to the memory of a man whose aspirations were all high, gentle, and good. Let colossal arches and reproductions of Imperial Rome mark elsewhere the triumphs of war. We will pay our honours to peace, art, science, and the domestic virtues, and we will do it on a scale which shall stand comparison with the most magnificent trophies wrung from a desolated world."

The following letter has been addressed, by permission, to the Right Hon. the Earl Granville, K.G., Lord President of the Council:—

"South Kensington, London, W., Dec. 31, 1861.

"My Lord,—Among the many suggestions which will doubtless be brought forward for memorials of the great Prince whose loss is deplored not only by his adopted country, but throughout the world, the project which his Royal Highness always had at heart of promoting industrial progress seems to me worthy of especial attention, as affording, perhaps, the most useful and important mode of perpetuating his memory to all time, and of constantly reminding all classes of his enlarged benevolence and practical wisdom. Having your Lordship's permission, I beg leave to submit for your consideration some observations in order to show how the project might be carried out.

"2. The supplemental charter of the 2nd of December, 1851, granted to the Commissioners of the Exhibition of 1851, empowers them to carry out 'a plan which in its general character should serve to increase the means of industrial education, and extend the influence of science and art upon unproductive industry.'

"3. This was the suggestion of his late Royal Highness the Prince Consort, and it was an aim and aspiration never absent from his mind. The second report of the Commissioners (pp. 40, 41) gives one version of the idea, but others are known to exist, drawn up by the Prince himself in great detail. It was proposed to carry this idea into effect by some combination of the various metropolitan and local institutions which promote industrial science and art, and by the centralisation of some of them in one locality; such centralisation, however, not being an essential part of the project. The chief object was to establish some system of combined action among scientific and artistic institutions which should increase the means of industrial education. This combination would, I conceive, afford a suitable memorial to the late Prince, without superseding other memorials of a monumental character.

"5. It might take the form of an Industrial University, to be known throughout the world as the 'Albert University.' The specific object of the institution would be to grant degrees and honours in those particular sciences and arts which directly influence works of industry.

"6. In the words of the second report, such an University might become 'the centre of a system of local institutions aided by local exertions and association; thus securing to our manufacturing population sound industrial knowledge, while, by confining attention to technical instruction, and not extending it to general education in science and art, such an University would be adding to, without interfering with, the means of instruction already existing in schools and colleges.'

"7. Such an University would differ from the London University in not requiring examination for matriculation, but perhaps accepting examination conducted by other authorities. The degrees and honours would be granted for specific success in subjects technically applied. A miner from Durham or Cornwall might acquire his degree in mining only; a chemist from Manchester, Bristol, Newcastle-on-Tyne, or the Staffordshire Potteries might take honours in chemistry only. So, the agriculturist in agriculture, the builder in construction, and the civil and mechanical engineer in engineering, &c. Degrees might be conferred in the fine arts of architecture, painting, and sculpture when combined with industrial application, and perhaps honour for musical acquirements should be given. The want of an authority to confer honours in mining knowledge has been already recognised by your Lordship.

"8. The management might be confided to a Senate, consisting for the most part of representatives of each of the various institutions proposed to be brought into combination. The members of the University would be those who obtained its degrees and honours, and they might perhaps be considered worthy of having electoral rights.

"9. Each representative of a scientific or artistic institution would be elected annually by his own society.

"10. The Senate, as in other Universities, would name the examiners, whose responsibility would be insured by payment for their services.

"11. The endowment should be partly from public subscriptions and partly from Parliamentary funds.

"12. The site of the proposed University should be at South Kensington.

"13. The working of the institution would be analogous to that of the University of London.

"14. The institution would undertake no direct instruction. It would not interfere with the various existing modes of instruction or management of institutions, but would simply ascertain and record results, and confer honours in respect of them.

"15. A charter of incorporation would be necessary.

"16. Without troubling your Lordship with further details at present, and trusting that sufficient has been said to show how his Royal Highness's project might be easily carried out,

"I have the honour to be, my Lord,
"Always your Lordship's faithful servant,
"HENRY COLE.

"The Earl Granville, K.G., &c."

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### The following letter has been addressed to the Secretary of the Society of Arts :—

Sir,—"A light is passed from the revolving year," and in the quiet contemplation which ever grows out of the serene sadness of those dim hours which follow the painful moments when dust is rendered back to dust, we ask ourselves what memorial shall we raise to mark our appreciation of the virtues of our departed friend.

The latent goodness which lives in every human heart, that spark of truth which cannot be crushed out of the soul of man, howsoever great may be the burthen of vice beneath which it lies buried, is ever and anon asserting its existence, by paying its tribute to the holiness of virtue.

Hero-worship is but an outward manifestation of that inward feeling which compels all men to acknowledge the sovereignty of goodness,—using that term to embody the many traits which distinguish the benefactors of their race. That desire to possess the image of a departed friend, which is equally strong in the breast of the mendicant as it is in that of the monarch, and which in every age and clime has displayed its power, is one of those virtues which cannot be annihilated, and which proves "the Heavenly origin of human love."

A people united in the bonds of a common sorrow inquire what memorial shall we raise which shall perpetuate the memory of the Prince whom we have lost for ever? The first idea is the common one—we desire to possess his likeness—and statues of the Prince Consort will decorate many towns of the British isles, and our children's children will thus be made familiar with his face and form. But while we thus create, as it were, the material outness of the good man whom we have lost, is it not possible to give a living reality to his thoughts which we have not lost, and to mould a form which, when quickened by the ideas promulgated from time to time by the Prince Consort, will become a ruling intellectual Power in the land? I turn to the collection of speeches and addresses of H.R.H. the Prince Albert, and they inform me that the dominant idea in his fine mind was "the realisation of the unity of mankind."

The following elegant paragraphs beautifully express important truths :—

"Man is approaching a more complete fulfilment of that great and sacred mission which he has to perform in this world. His reason being created after the image of God, he has to use it to discover the laws by which the Almighty governs his creation, and, by making these laws his standard of action, to conquer nature to his use, himself a divine instrument.

"Science discovers these laws of power, motion, and transformation; industry applies them to raw matter, which the earth yields in abundance, but which becomes valuable only by knowledge.

"Art teaches us the immutable laws of beauty and symmetry, and gives to our productions forms in accordance with them."

Whenever the occasion presented itself, the Prince Consort never failed to express his desire that the ameliorating powers of science should be extended to places where ignorance, and consequently superstition, still hold rule, and that the sweet amenities of art should exert their refining influences throughout the world.

These were his ever present thoughts, and when the question of a "Memorial of the Great Exhibition" was submitted to the Prince, we find the following reply :—

"It might, probably, be done by the endowment of one or more professorships, by the institution of periodical exhibitions, by the purchase of fine works of art for the national museums, or by the endowment of prizes for specific objects. But that which strikes his Royal Highness, at this moment, as the simplest and most effectual method, would be to found scholarships, as prizes for proficiency in certain branches of study connected with art and science. * * * * * * The competition for such prizes, as being immediately connected with the objects of the Great Exhibition, might, if so wished, be conducted under the auspices of the Royal Commissioners, who might meet publicly each year, on the anniversary of the opening of the Exhibition, to announce the successful competitors, when the reports of the preceeding year, which the scholars might be instructed to furnish, might also be read, and their publication for general use afterwards undertaken by the Commissioners."

Mr. Henry Cole having addressed a letter to the Earl Granville on the establishment of an Industrial University, which it is proposed shall embody the suggestions of his late Royal Highness, it may appear that I am guilty of presumption in offering these remarks. If so, allow me to presume yet further, and use the words of the Prince as my apology.—"I conceive it to be the duty of every educated person, closely to watch and study the time in which he lives, and, as far as in him lies, to add his humble mite of individual exertion to further the accomplishment of what he believes providence to have ordained."

In 1840 I became the Secretary of the Royal Cornwall Polytechnic Society, which still lives in vigour, doing its excellent work of rewarding annually every meritorious effort of human thought and human industry which may be submitted to its judges. From that time to the present moment, I have been intimately connected with, what I will call, the People's Institutions throughout the land. Hence, I venture to offer some suggestions which occur to me, these being the result of a full knowledge of the state of our popular institutions. I have worked with them when flourishing as educational establishments, and I have grieved when I have seen them yielding to that race for popularity which has made them rivals of the concert room and the theatre.

A large number of the Institutions in Union with the Society of Arts—perhaps all—are most desirous of returning to the path from whence they have deviated. They have fed their members with stimulating food so long, that they complain if a less exciting but more healthful diet is offered to them, and cease to subscribe; consequently, to maintain their position, the Institutions are compelled to persevere in that career which is fatal to their permanent existence.

To render effective the "Albert University," which Mr. Cole, with the Royal Commissioners, thinks "might become the centre of a system of local Institutions, aided by local exertions and association," it is essential that the institutions of the people, by whatever name they may be known, should be reorganised. A new educational system must be introduced amongst them. The difficulties are many—the progress may be slow—in some places the opposition will be keen, but any effort made with a singleness of purpose towards the diffusion of sound information on nature's works and nature's laws, and the cultivation of a knowledge of the beautiful, must eventually succeed.

I cannot pretend to offer any suggestions at present relative to the methods by which this idea may be carried out. The Society of Arts has already published a "Report on Industrial Instruction." Many valuable thoughts occur therein, but hitherto they have been barren of results.

I would urge upon all the importance of making our great memorial of the departed Prince a realisation of his leading thought. To do this effectively, aid must be given to all those Institutions which desire to work for the benefit of the localities in which they are placed, and an earnest effort must be made to restore to all an educational system, using that term in its most liberal, its most extended acceptation. Then the Senate of the contemplated University of Industrial Science, when they "met publicly each year, on the anniversary of the opening of the Exhibition," might really proclaim that they were working out that idea of the Prince Consort which promises to lead to "the realisation of the unity of mankind."

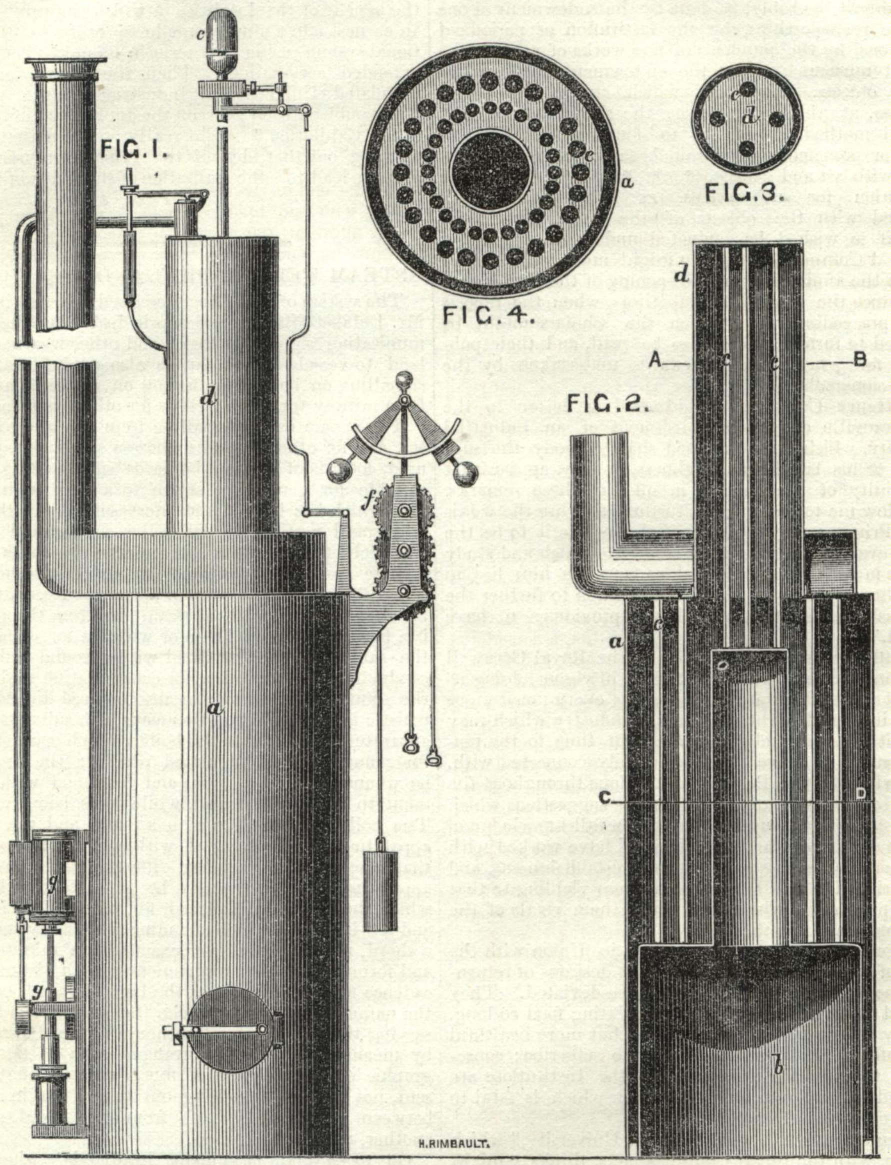
I am, &c.,
ROBERT HUNT.

## STEAM TELEGRAPHIC AND FOG SIGNALS.

The system of signalling, described below, is invented by Mr. Delabere Barker, and is principally intended for communicating signals in foggy and other weather from the land to vessels at sea, but is also applicable for use in signalling on board vessels, and on railways, and to and from railway trains, as well as for other purposes.

The apparatus for signalling from the land to vessels at sea, and for other purposes where a stationary apparatus is used, consists of a steam boiler or superheating apparatus suitable for generating steam to a very high pressure; that which has been found most suitable for the purpose is a small vertical tubular boiler surmounted by a high steam chest, into which some of the fire-tubes from the furnace are carried for the purpose of superheating the steam therein to a pressure of about 150 lbs. on the square inch. Connected with a steam pipe from the said boiler is a powerful steam whistle or whistles for signalling, and the said whistle is furnished with a sound reflector and conducting tube or tubes for concentrating and directing the sound of the whistle in any required direction. The whistle is operated upon by means of a suitable automatic apparatus connected to the boiler, which opens the valves for sounding it at regulated periods; the apparatus to be wound up every hour, and furnished with a movement to enable it to work while it is being wound up. The boiler is fitted up with a pump and the necessary apparatus for supplying it with water. By using more than one whistle, sounding different notes on the same apparatus, an identity may be given to the locality in which the apparatus is placed, for example, a 6-in., 5½-in., and a 5-in. whistle, each sounding alternately and forming a chord, may be gone over exactly in a minute of time, and forms a suitable arrangement with a distinct musical cadence for signalling from the land to vessels out at sea; the name of the place at which the apparatus is fixed thus serving the purpose of a lighthouse in the densest fog, or by means of a properly arranged code of signals, telegraphic communications of much greater length may be sent, not only in signalling out to sea, but in signalling between vessels at sea, or from one fixed station to another, as may be desired.

On rocks and prominent headlands, where lighthouses and beacons are deemed essential to the safety of the maritime and commercial interests, these signals are said to be capable of identifying the rock or headland with the utmost clearness and certainty to all vessels on the sea, in the densest fog and in the wildest storm, to a considerable distance, varying from six to twelve miles in any one direction required, and maintained at an expense about one-half of the lights now in use. The signals may be used between two vessels when meeting, being easily exchangeable to a distance of five miles, at the rate of about ten syllables in a minute. The news-press of New York, for instance, expends from £1,000 to £1,500 per annum in intercepting the mail steamers, a service most imperfectly performed by yachts; through the medium of these signals this could be accomplished by the steamers themselves with certainty, in passing the different points where the news vessels are now stationed. In using the apparatus on board a vessel the most suitable position to place it is on the forecastle with a sound reflector or reflectors behind the whistle to reflect the sound, with a tube or tubes to direct the sound in advance, and in a measure shield the passengers from the annoyance hitherto experienced when steam whistles have been used. The reflector and tube may be united, if deemed desirable.



In the illustrations, Fig. 1 is an elevation of a superheating boiler fitted with apparatus according to the invention; Fig. 2 is a vertical section of the boiler; Fig. 3 is a section in plan on the line A, B; and Fig. 4 section on the line C, D. *a* is the boiler shell, *b* is the furnace; *c* is the fire-tube; *d* is the steam-chest; *e* is the whistle (the reflector and conducting tubes not being shown); *f* is the automatic apparatus operating on the valves for sounding the whistle; and *g* is the feed-pump apparatus.

One of these signals has been for some time in use at the Partridge Island Light-house Station, at the entrance to the harbour of St. John, New Brunswick, and the strongest testimony has been given of its efficiency. The following is an extract from a notice to mariners issued by the Admiralty:—

"In order to warn vessels of danger when approaching Partridge Island, near St. John, in the Bay of Fundy, a steam-whistle has been fitted at the light-house on that island, and will be used during fog. The shrill sound of this whistle once a minute having been heard from a position eight miles to windward of it, has proved the efficiency and utility of this addition."

A company is being established for carrying out this invention, and they propose to erect one of these signals, in the first instance, at some light-house station on the English coast, and to bring it immediately under the notice of the Trinity Board. Application has been already made for this purpose, and it is not improbable that Dungeness will be the point selected for the first trial. For its introduction to the notice of the railway companies a similar arrangement will in all probability be carried out.

A portion of the patent has been applied to the ordinary signal now in general use on the railway locomotive, so as to concentrate the sound and throw it in the only one direction required, with the view of sparing the passengers and surrounding neighbourhoods the great annoyance they are now compelled to tolerate.

## CÆSIUM AND RUBIDIUM.

These are the names of the new metals discovered by spectrum analysis by MM. Bunsen and Kirchoff. The Academy of Sciences has received a communication from M. Grandeau, who states that he has had the advantage of making his researches almost under the eyes of M. Bunsen. M. Grandeau began by examining the various mineral waters and minerals, presenting some analogy with the waters of Durkheim, which have yielded cæsium, and with the lepidolite of Rozena, from which the illustrious chemist of Heidelberg has extracted rubidium. The mother waters of the salt-pits of the basin of the Meurthe, of the Mediterranean, the Ocean, the Dead Sea, and the mineral waters of Bourbonne-les-Bains and Vichy were successively subjected to analysis. Sea water and the salt water of the Meurthe only yielded lithia; that of the Dead Sea lithia and strontian; but the waters of Vichy, of which several thousand litres had to be evaporated, yielded about two grammes of the double chloride of platinum and cæsium, and another of platinum and rubidium, the proportion of which was not ascertained. The quantity of the new metals contained in the waters of Vichy is, therefore, very small; but forty hectolitres of the waters of Bourbonne-les-bains yielded, besides chloride of sodium, various calcareous salts and lithia, a considerable quantity of the chlorides of cæsium and rubidium. Some years ago M. Troost had prepared several kilogrammes of salts of lithia, and preserved all the residues. These, examined by M. Grandeau, furnished him with a considerable quantity of a mixture of the two metals in nearly equally proportions. The same result was obtained from a lepidolite of Prague, infinitely richer in cæsium than that of Rozena. Lastly, among the artificial productions examined by M. Grandeau, there were the residues of the saltpetre manufactory of Paris. From these Captain Caron had extracted a salt of platinum, in which considerable quantities of the new metals were discovered by M. Grandeau in equal proportions. The refuse of a Belgian saltpetre manufactory contained much rubidium without a trace of cæsium. From all this it would appear that the two new elements are much more widely diffused through nature than was previously suspected.

## FINE ARTS IN IRELAND.—TAYLOR PRIZES AND SCHOLARSHIPS.*

The following Prizes are offered for the year 1862, and are open to Art Students of Irish birth or attending a School of Art in Ireland, to be awarded at an Exhibition to be held on the 10th November, 1862, at the house of the Royal Dublin Society:—

1. For the best Picture in Oil Colours, the subject historical or familiar, containing at least three figures to a scale of three feet; the Scholarship of ... ... ... ... ... ... £40
2. For the best Landscape in Oil Colours, the prize of ... ... ... ... ... ... £20

To be increased or lowered in amount, or wholly withheld, according to the merit of the works. The Scholarship may be held for a second and third year, provided a work of adequate merit be produced in each year.

All works must be delivered before two o'clock on Saturday, 1st November, 1862, at the house of the Royal Dublin Society, Kildare-street, Dublin, where the conditions and other particulars may be ascertained.

## PARLIAMENTARY RESPONSIBILITY AND NATIONAL MUSEUMS.

The *Athenæum* says:—"The importance of consolidating and improving the management of the British Museum, by making it more responsible, has often been discussed in these columns, and there seems some likelihood of the views we have several times expressed at last being realised. It has hitherto escaped public notice that at the end of last session of Parliament, Lord Henry Lennox, who had made himself master of the National Gallery question, and successfully prevented further expenditure in temporary patch-work of the edifice, gave notice of his intention to bring before the House of Commons the importance of ensuring a Parliamentary responsibility for the expenditure of public money hitherto entrusted to trustees of various institutions. He specified in his notice the British Museum, where Parliament contributes about seventy times the amount which the Trustees hold as a private corporation; also, the National Gallery, where the management is divided between the Treasury and the Trustees; also, the National Portrait-Gallery, where the same system obtains. The year of the International Exhibition is particularly appropriate for the discussion of subjects of Science and art, and it is to be hoped that the House will apply some remedy to our present system. The first step in any reform is to ensure the greatest responsibility, and in the words of John Stuart Mill, make it 'apparent to all the world who did everything, and through whose default anything was left undone.'"

## EXTRACTS FROM THE REPORTS OF H.B.M. CONSULS.

*(Continued from page 102.)*

The Present State of Seville.—Seville (says Mr. Consul Williams) is situated principally on the left bank of the River Guadalquivir, about fifty-four English miles from the sea; the navigation is perfectly safe, except in time of inundations, there being no rock in the whole course of the river. The water is sufficiently deep for any kind of vessels, except on passing three sand-banks, which might easily be removed; but in their present neglected state cannot be passed with more than ten-and-a-half feet of water, even at spring tides, so that the far greater number of vessels have to be lightened at a place called the New Cut, about sixteen miles below, to enable them to come up abreast of the town. The port or part of the river usually occupied by the shipping will contain about 100 sail of vessels, but the mole is not of a sufficient extent for the present augmented state of trade, consequently ships are obliged to lay along the banks of the river to take in their cargoes.

A plan has been formed which has been sanctioned by the Spanish Government, for improving the state of the river, of which the principal works in contemplation are the continuation of the mole from its present limits along the bank as far as the iron bridge, which will augment its extent by about 600 yards, and the cutting of a new channel through two distinct points where the river makes a very winding turn, forcing it to take a direct course, which will shorten the distance by at least seven miles, and leave out two sand-banks. The remaining sand-bank is to be removed by a dredging machine, brought from England, which is now nearly completed, and will soon commence working.

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* See *Journal*, Vol. IX., p. 112.

The Guadalquivir is only navigable above the bridge for flat-bottomed boats, which are principally employed in bringing coals from the mines of Villanueva, a place about six leagues from Seville, but the coals are of a quality only to be used by the blacksmiths. The steamers and steam engines cannot work without English coals.

On arrival at Seville from St. Lucar, the city is nearly concealed from the view, as it is built on a part of that immense plain which extends from Cordova nearly to the sea. The principal objects seen on the left bank are the cathedral and the palace and gardens of the Dukes of Montpensier, and on the right the suburb of Triana; the iron bridge, seen in the distance, which is of modern construction, occupies precisely the same place as the old bridge of boats which had subsisted from the time of the Moors. The place is surrounded by Moorish tapia walls, extending about four English miles, in general well preserved, and in some parts quite perfect. On the outside of these walls are rows of trees and walks which make the entire circle, and are a great comfort to those who have to move about during the heat of the day.

Besides the space within the walls, the city has acquired considerable extent on the outside, comprehending the suburbs of Triana, San Benardo, La Calzada, La Macarena, and Los Humeros. The streets are very irregular, having undergone scarcely any alteration in their ground plan since the time of the Moors, but the place is fast losing its Moorish character owing to the many new buildings and improvements. No place in Spain can boast of so many fine public buildings, and it may be calculated that a quarter of the ground inside the walls is occupied by churches, convents, hospitals, and Government establishments. The cathedral is undoubtedly the finest in Spain. Seville is the see of an archbishop, the residence of the Captain-General of the Fourth Military District, comprehending the provinces of the same name, Cordova, Huelva, and Cadiz; the seat of the Audiuncia, or Superior Court of Justice of the same district, and the University. There are two public libraries, an Academy of the Fine Arts, and several colleges and other places of public instruction. The Government establishments, besides the Royal Palace, are the Cannon Foundry, the Military Arsenal, the manufactory of muskets and percussion caps, the cigar and snuff manufactory, the Mint, the Lonja (or archives of the colonies), and the quicksilver stores. These establishments give occupation generally to about 6,000 persons, which is a great advantage to the place. The population is at least 130,000 persons, but no exact census has ever been taken. Seville has augmented greatly in riches and trade during the last twenty years, which may be partly attributed to the constant immigration of opulent mercantile houses from South America. Landed property and dwelling-houses have doubled their value during the same period, which I consider the natural consequence of the increase of capital and speculation, and the prosperous state of this part of Spain.

The manufacture of silks is carried on here to a great extent, and though not equal to the French in the superior kinds, they rival those of Valencia, and serve to supply great part of the south of Spain and Estremadura. The manufacture of all kinds of coarse linen is also very considerable, and has completely excluded the English and German linens, with the exception of the very superior classes. But these are entirely dependent on their supplies of English yarns, and in case of a war would be at an end. Soap is also made here in great perfection for common purposes, and this place supplies with that article great part of Spain, and considerable shipments are made for the Havana and South America. There are also manufactories of coarse woollens and sacking; of horn and tortoise-shell combs, and some kinds of inferior hardware. Two potteries have been established by British subjects. That of Messrs. Pickman and Co., which is of some years' standing, has made great progress, and supplies great part of Spain with earthenware, though inferior in quality to the English. They employ about 400 persons. The other has scarcely made a commencement. These potteries are also dependent on England for their supplies of clay and ground flint. Four iron foundries have been established (though on a small scale), which are actively employed in casting for the railroads and mining districts.

There is at present a great rage for mining. Besides the famous quicksilver mines of Almaden, which are monopolised by the Government, there are numerous mines now at work. The iron mines of Pedroso are making great progress, and produce an immense quantity of iron, and of a very good quality; but the want of machinery to give it a convenient form prevents its being applied, except for certain purposes of the coarser kind, consequently a supply of English iron is required. The lead mines begin to produce large quantities of that metal, the greater part of which is exported for France and England. Besides the copper mines, copper is produced in abundance in a rivulet called Rio-Tinto. Besides the Government establishment, a number of private individuals have established themselves in the vicinity, and take advantage of the same waters; and having been very successful, they have exported large quantities of that article and have increased the importation of English pig iron, which they require to immerse in the water. There are also silver mines, but these have not yet had the same success. The want of good roads is a great drawback to these mining establishments, for, with the exception of the turnpike roads from Seville to Madrid and Cadiz, and from Seville to Badajoz, all the others are as bad as those in Barbary. With good roads, Seville might be amply supplied with timber of all kinds; but in their present state the numerous oaks, chesnut, and pine-woods within the distance of fifteen or twenty leagues are of no avail, and nearly all the timber required is obliged to be imported from Russia, Sweden, and Norway. The projected railroads, when carried into effect, will remedy the evil. That from Madrid to Badajoz, Cordova, and Seville, passing through the coal mines of Belmez and Espiel, in the Sierra de Cordova, will render those mines available, and enable the coal, as well as all the produce of Estremadura to be brought down at a reasonable expense. The part from Cordova to Seville is making progress, and now employs about 6,000 workmen; the first seven leagues, which extend from Seville to Lora, are to be opened in all shortly, and will be a great advantage to the mines of Pedroso, Villanueva, and many others situated in that direction. The railroad from Seville to Cadiz is also advancing rapidly, and is engaged to be finished in two years.

The soil in both the provinces of Seville and Cordova is very rich, particularly the plains of the Guadalquivir, and there is scarce any part that cannot be rendered available for some purpose or other. I calculate that full one-half of the land in these provinces is uncultivated, and only serves for pasture ground for the numerous herds of cattle of all kinds that abound in this part of the country. One quarter is occupied by the olive plantations, and the remaining quarter applied to the sowing of corn and grain, which is always the best land. The uncultivated is, in many districts, completely covered with oaks (of which there are three different kinds), chesnut trees, elms, wild olive trees, and many others; but the greatest extent is of pine wood, which tree thrives in the light sandy soil. The most important branch of agricultural produce I consider to be oil, which is obtained to such an extent as not only to supply the wants of the population, who consume a very large quantity, particularly among the lower classes, who may be said to live on bread and oil, but to export all that is required for Biscay and the northern provinces, and a considerable portion for Cataluna and the eastern coast of Spain, as well as for Marseilles, England, Russia, and the Spanish colonies. Of wheat I calculate that one-half the quantity produced is sufficient for the home consumption, which is also the case with Estremadura. This accounts for the great quantity exported from Seville, particularly coastways. Barley is not grown to that extent, consequently no great quantity is exported. Beans, and all the other kinds of grain, are produced in very great abundance, and considerable quantities are exported for other parts of Spain. The orange groves are very numerous and productive, and there are on an average about one hundred vessels loaded yearly for England and other countries, besides the immense quantities consumed in the country. Chesnuts, which are very fine and abundant, cannot be exported at their present price from the north of Spain, owing to the expense of land carriage. Cork is brought down from Estremadura in great abundance, and is chiefly shipped for England. Wool is still an article of great importance, but the importation for England is very much diminished, and the greater portion is consumed in this country. The export trade has augmented considerably, and will be much greater as soon as the railroads are made, so as to bring down the produce of the interior provinces.

The imports are woollens, linens, and cottons (of the superior classes), linen yarns, hardware, tin plates and iron, earthenware, drugs, machinery, and implements for the railroads and mines, coals, clay, and ground flint, codfish, timber, and many other articles not easily to be enumerated, which are required not only for the supply of this province, but also for Estremadura and the interior.

I ought to have stated that our communications with Cadiz and St. Lucar are kept up by three steamers, which are constantly going and coming with passengers, and another with passengers and goods goes to Gibraltar and back, touching at Cadiz.

The augmentation of the number of British subjects residing in Seville and its neighbourhood, had rendered it absolutely necessary to establish a Protestant cemetery, for which purpose a piece of ground of about four acres has been purchased adjoining to the Garden of St. Jerome, about a mile from the walls on the north extremity of the city, which is in a great part inclosed by walls. The expense has been defrayed by the subscriptions of British residents, and it is to be hoped that we shall be enabled to complete the enclosure by further subscriptions.

# Home Correspondence.

## OIL OR OTTO OF PIMENTO.

Sir,—In reference to the communication by Dr. Bowerbank, which appeared in No. 474 of the *Journal*, respecting oil, properly "otto," of pimento, I should be glad to make a few remarks. Dr. Bowerbank appears to infer that "money might be made" in Jamaica, by the "industrious man in humble circumstances" having "a small still and a kitchen fire," in procuring the odour of the pimento in a separate state. Believing this profit to be a delusion, and that such labour would be in vain, I now give my reasons.

Otto of pimento is an analogue of otto of cloves, so much so that, to use Dr. Bowerbank's words, "it is employed to adulterate the latter."

In a gamut of odours, perfumers would consider pimento as one octave higher than the note clove. In a mercantile sense, perfumery factors are the only consumers of these odours, about 5,000 lbs. of otto of cloves being consumed by them every year for scenting soap, &c.

One hundred weight of cloves will yield by distillation, on an average, 18 lbs. of the otto of cloves, the present market value of which is 3s. 6d. per lb. Now, as Dr. Bowerbank shows, pimento yields less than 6 lbs. of otto to one hundred weight, this intrinsically is not worth more to the perfumer than clove, although it is now quoted at 16s. per lb., for this high price is caused by there being so little yield and so little demand; but if a quantity was brought into the market, its price would range with clove, or even lower; and it is admitted here that this class of ottos do not pay interest of capital for the outlay necessary in their production. It is known that the Dutch now and then burn whole forests of clove trees, for the purpose of maintaining the present value. With what hope of success, therefore, could pimento be cast upon the market?

Jamaica, however, has natural resources and materials which perfumery factors much desire to possess; thus, oil of ben or behn, yielded by the *Maringa*, which is a naturalised tree of Jamaica, is one of these. Otto of jasmin, from the *Jasmin grandiflora*, ottos from *Plumeria alba* and *ruba*, and numerous other flowers, which now "waste their fragrance in the desert air," would be of great value—say, at least, 20s. an ounce for the last named.

It should be known to our foreign consuls and to others interested, that there is a want, among perfumery factors, of the products from flowers such as are rare here, but that we are not in want of any kinds of spice odours, that market being amply supplied.

I am, &c.,
G. W. SEPTIMUS PIESSE.

## MEETINGS FOR THE ENSUING WEEK.

Mon......Geographical, 8½. 1. Mr. F. J. Monat, M.D., &c., "Narrative of an Expedition to the Andaman Islands, in 1857. 2. Mr. A. R. Wallace, "On the Trade of the Eastern Archipelago with New Guinea and its Islands."
Medical, 7½. Special General Meeting. 8½. Dr. S. Fenwick, "Desquamative Gastritis in Scarlatina."
Tues. ...Civil Engineers, 8. 1. Address on taking the chair, by Mr. John Hawkshaw, President. 2. Renewed Discussion upon Mr. Bailey Denton's Paper, "On the Discharge from Under-drainage, and its effect upon the Arterial Channels and Outfalls of the Country."
Ethnological, 8.
Medical and Chirurgical, 8½.
Syro-Egyptian, 7½. Mr. John Hoskyn Abrahall, "Over Lebanon and Back in the Snow."
Zoological, 9.
Royal Inst., 8. Professor Tyndall, "On the Transmission of Heat through Gases."
Wed. ...Society of Arts, 8. Mr. Blanchard Jerrold, "Comparison of the Year 1851 with the Year 1861."
London Inst., 7.
Meteorological, 7.
Thurs...Royal, 8½.
Antiquaries, 8½.
Linnæan, 8. 1. Dr. Hooker, "On *Welwitschia mirabilis.*" 2. Mr. Bentham, "On *Inocarpus.*" 3. Dr. Harvey, "On *Algæ* collected by Dr. Lyall at Vancouver's Island, &c."
Chemical, 8. 1. Dr. Bence Jones, "On Hippuric and Uric Acids in Healthy Urine." 2. Mr. George F. Radwell, "On the Solubility of Sulphate of Lead in Nitric and Hydrochloric Acids." 3. Dr. H. Muller, "On a New Mode of Effecting Chlorine Subst ous."
Numismatic, 7.

## PATENT LAW AMENDMENT ACT.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[*From Gazette, January 3rd*, 1862.]

*Dated 26th August*, 1861.

2120. R. W. Jones, Cork—Imp. in heating and ventilating, especially applicable to Turkish baths.

*Dated 12th September*, 1861.

2267. M. A. F. Mennons, 39, Rue de l'Echiquier, Paris—An improved combination of machinery for the production of Valenciennes, Chantilly, Brussels, and other similar laces. (A com.)

*Dated 14th September*, 1861.

2293. M. A. F. Mennons, 39, Rue de l'Echiquier, Paris—An improved apparatus for the conveyance of medicinal substances into various parts of the human body.

*Dated 21st September*, 1861.

2362. C. Board, Bristol—Imp. in veneering presses.

*Dated 4th December*, 1861.

3042. R. Kennedy and J. Armstrong, Lisburn, Ireland—An improved arrangement of driving gear.

*Dated 5th December*, 1861.

3047. A. T. Carr, Carlisle-street, Soho—The addition to horses' shoes of certain material to prevent slipping.
3050. J. Wilson, Glasgow—Imp. in frames used for displaying trade show cards, pictures, or other similar devices.

*Dated 6th December*, 1861.

3056. E. D. Seely, T. F. Wells, and G. A. Phillips, Norfolk, Massachusetts, U.S.—An improved apparatus for holding and placing percussion caps on fire-arms.

*Dated* 10*th December*, 1861.

3092. W. F. Stanley, 3, Great Turnstile, Holborn—The use of aluminium for the construction of mathematical instruments used for geometrical drawing, surveying, and nautical purposes, and imps. connected therewith.

*Dated* 11*th December*, 1861.

3105. J. Schloss, Cannon-street—An imp. in forming the leaves of albums and books for containing photographic portraits and views. (A com.)

3107. R. A. Brooman, 166, Fleet-street—Imp. in decorating or printing upon china, porcelain, earthen and other like wares. (A com.)

3109. J. Potter, Leeds—An improved mode of jointing or connecting telegraph wires, which is also applicable to jointing or connecting signal wires, fencing wires, and other wires or rods.

*Dated* 12*th December*, 1861.

3111. R. Searle, Woodford Wells, Essex—Imp. in the treatment, preparation, and combination of metals used for sheathing ships and marine erections, also for roofing buildings and other purposes.

3114. W. W. Godfrey, 52, Whiskin-street, Clerkenwell—An improved fastener or protector for Albert guards.

3115. W. E. Wiley, 34, Great Hampton-street, Birmingham—An imp. or imps. in pencil cases and holders for crayons and other solid writing or marking materials, which imp. or imps. may also be applied to crochet needle holders.

3116. R. Mushet, Coleford, Gloucestershire—An imp. or imps. in the manufacture of iron and puddled steel.

3117. W. S. Longridge, Alderwasley Iron Works, Derbyshire—Imp. in railway wheels and tyres.

3118. A. Tonnar, Eupen (Rhenish Prussia)—Imp. in the method of, and apparatus for, drying and cleansing malt as well as any other species of grain and seed intended for brewing, distilling, and agricultural purposes.

3119. J. W. Scott, Worcester—Imp. in wads for fire-arms.

3120. J. D. Jobin, South Island-place, Clapham-road, Surrey—Imp. in locomotive engines, parts of which imps. are also applicable to marine and stationary engines.

3121. H. Bailey, Trump-street, Cheapside—An improved button or stud.

*Dated* 13*th December*, 1861.

3122. R. Ashworth, G. Shepherd, J. Cormack, and J. Dearden, Stacksteads, Lancashire—Imp. in looms for weaving.

3124. W. Bell, Leamington—Imp. in kitcheners or cooking ranges.

3125. F. Brampton, Birmingham—An imp. or imps. in the manufacture of the middle joints of measuring rules.

3126. H. J. Olding, Smith-square, Westminster—Imp. in the mode of, and apparatus for, feeding steam boilers, also in apparatus for supplying fluids, for other purposes, and in apparatus for raising fluids.

3127. E. C. B. de Beaulieu, Avallon, France—Imp. in the manufacture of spirituous liquors, and in apparatus employed therein.

3128. G. Bird, Glasgow—An improved grease for lubricating frictional surfaces.

3130. T. Walker, Birmingham—Imp. in means or apparatus for indicating the speed of vessels, and for taking soundings.

3135. A. V. Newton, 66, Chancery-lane—An improved arrangement of fire escape. (A com.)

3136. J. Hetherington, Manchester, T. Webb, Smallwood Manor, Uttoxeter, and J. Craig, Tutbury, Staffordshire—Imp. in machinery or apparatus for spinning and doubling cotton and other fibrous materials.

3137. H. Appleby, 4, Tavistock-place, Plumstead-common, Kent, and H. Harrison, Grand Junction Works, Northampton—Imp. in machinery for boring wood and other materials used in the manufacture of brooms and brushes.

3138. T. K. Adkins, Wallingford, Berkshire, and J. Bonthron, 106, Regent-street—Imp. in the manufacture of starch and in apphratus employed therein.

3139. J. Kelly, Brook-lodge, Roscommon—Imp. in the treatment of milk for the manufacture of butter, and in apparatus for the same.

3141. R. A. Brooman, 166, Fleet-street—Imp. in blowers or apparatuses for superheating steam and other gases, and for projecting them combined with atmospheric air upon ignited combustible matter.

*Dated* 14*th December*, 1861.

3143. J. E. Duyck, Tutsham Mills, West Farleigh, Kent—Imp. in the expression of oil from cake and seeds, and in apparatuses employed therein.

3146. W. R. Rogers, Gray's-inn-road—An improved mode of constructing dovetail joints.

3147. W. E. Debenham, The Terrace, Kensington-gardens-square—An improved plate holder for photographic purposes.

3148. W. Husband, Hayle, Cornwall—An improved water safety valve.

3149. J. H. Johnson, 47, Lincoln's-inn-fields—Imp. in railway rolling stock. (A com.)

*Dated* 16*th December*, 1861.

3151. J. Willis, jun., Newcastle-on-Tyne—Imp. in the preparation of materials applicable to the manufacture of paper.

3153. G. Davies, 1, Serle-street, Lincoln's-inn-fields—Imp. in the manufacture of textile materials. (A com.)

3154. W. Bartram and W. S. Harwood, Sheffield—An improved apparatus for filling and ramming cartridges for breech-loading and other fire-arms.

3155. D. Chalmers, Glasgow—Imp. in looms for weaving, and in the manufacture of cloth therefrom.

3157. W. G. Laws, Tynemouth—Imp. in railway point signals.

*Dated* 17*th December*, 1861.

3161. J. B. Bunney and T. Wright, Birmingham—Imp. in ornamenting metallic and non-metallic bedsteads, and other articles made principally of metallic rods or tubes.

3162. R. Shaw, Marple, Cheshire—Certain imp. in carding engines.

3164. A. V. Newton, 66, Chancery-lane—Improved hoisting apparatus. (A com.)

*Dated* 18*th December*, 1861.

3166. R. Scott, 29, Great Portland-street—An improved method of rifling or grooving the barrels of fire-arms and ordnance.

3168. J. Perrin, Hyde, Cheshire—An improved equilibrium valve.

3170. W. Dicey, Waltham Abbey, Essex—Imp. in submarine electric telegraphic cables.

3172. M. Hanff, Tottenham-street, Tottenham Court-road—Imp. in the manufacture of boxes and cases.

3174. J. Thiébaut, Mile-end, Middlesex—Imp. in the ornamentation of textile fabrics.

3176. E. Pace, Queen-street—An improved lath for Venetian blinds.

3178. J. Bannehr, High-street, Exeter—Imp. in apparatus for desiccating grain, seeds, and other articles.

*Dated* 19*th December*, 1861.

3180. W. Betts, Wharf-road, City-road—Im. in the manufacture of coverings for the ends of cigars.

3182. W. Tate, Horsley-hill, near South Shields, Durham—Imp. in armour, and in making and applying the same for protecting wood and iron ships of war and batteries.

### INVENTION WITH COMPLETE SPECIFICATION FILED.

3251. M. Henry, 84, Fleet-street—Imp. in fire-arms, and in adapting bayonets or cutting or piercing warpings thereto. (A com.)—28th December, 1861.

### PATENTS SEALED.

[*From Gazette, January* 3*rd*, 1862.]

*January* 3*rd.*

1720. H. Schutt.
1723. J. Ridsdale.
1727. E. R. Handcock.
1728. G. Tutill.
1732. T. Cobley.
1734. T. Cobley.
1740. J. Keats and G. E. Keats.
1750. J. Farron.
1754. T. G. Messenger.
1784. W. Clark.
1936. J. Lewis.
2768. G. Horton.

[*From Gazette, January* 7*th*, 1862.]

*January* 7*th*

1733. T. T. Macneill.
1739. W. C. Parkinson.
1751. J. R. Cotter.
1755. H. Ashwell.
1758. J. Adams.
1766. F. Tolhausen.
1783. E. G. F. de la Provotais.
1815. R. Walker.
1817. R. Mushet.
1853. J. Sidebottom.
1866. M. Klotz.
1875. F. N. Thurel.
2528. T. P. Bennett & J. Collier.
2635. H. Frost.
2723. R. W. Winfield.
2724. R. W. Winfield.
2878. W. E. Newton.

### PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

[*From Gazette, January* 3*rd*, 1862.]

*December* 30*th.*

2995. S. S. Bateson.
5. J. E. Drouot.

*January* 1*st.*

17. J. Harris.

[*From Gazette, January* 7*th*, 1862.]

*January* 2*nd.*

39. J. Howard.
84. D. E. Hughes.
153. R. Garrett, jun., and J. Kerridge.

*January* 3*rd.*

52. I. Holden and A. Holden.

*January* 4*th.*

37. F. Clark.
42. W. Corfield, jun.
50. J. H. Johnson.

### PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

[*From Gazette, January* 3*rd*, 1862.]

*January* 1*st.*

73. E. Hall.

[*From Gazette, January* 7*th*, 1862.]

*January* 3*rd.*

25. G. W. Muir.

## LIST OF DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

| No. in the Register. | Date of Registration. | Title. | Proprietor's Name. | Address. |
|---|---|---|---|---|
| 4428 | 1861. Dec. 28. | Reaping Machine ... ... ... ... ... ... | Richard Alty ... ... ...<br>John Whiteside ... ... ... | Pilling.<br>Kirkham, Lancashire. |
| 4429 | 1862. Jan. 3. | The Paragon Crinoline ... ... ... ... ... | Messrs. R. and G. Gray & Co. | Pond's Works, Sheffield. |
| 4430 | ,, ,, 6. | Paper Knife and Book Marker ... ... ... | Messrs. Parkins and Gotto ... | 24 and 25, Oxford-street, W. |